Less frequently we meet with a weak heart, especially in anæmic patients or those who have lost a good deal of blood during the pre-climacteric period. The heart-beat is rapid and weak, the pulse feeble and irregular. These patients have dyspnœa, are liable to attacks of angina, and show evidences of obstruction to the circulation, œdema, and albuminuria.

In still a third class an accumulation of pericardial fat at the climacteric gives rise to serious disturbances, especially to dyspnœa and palpitation on exertion. In more marked cases venous stasis, œdema, and albuminuria appear, and even grave pulmonary complications, but by careful regulation of diet these may be held in check until the period of danger is passed.

NEPHRECTOMY FOR URETERO-VAGINAL FISTULA.

GUSSEROW (*Charité Annalen*, xv. Jahrg.) met with an interesting case of uretero-vaginal fistula, in which he first performed kolpo-kleisis, having made a vesico-vaginal fistula. The latter closed, so that it was necessary to reopen it; then, after it had remained open for three months, kolpo-kleisis was again performed, and the patient was relieved for a year, at the end of which time she returned with cystitis and a collection of calculi in the vaginal pouch, which had caused a separation of the cicatrix. Nephrectomy was then performed, successfully, as a last resort.

PÆDIATRICS.

UNDER THE CHARGE OF

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A CASE OF TRACHEOTOMY FOR CROUP IN AN INFANT EIGHTEEN MONTHS OF AGE; CURED.

DIDIER (*Lyon Médical*, No. 29, 1890, p. 393), in the Charité during the winter months of 1889 and 1890, had the opportunity to make twelve tracheotomies in children under six years of age, attacked with croup. Five of the cases recovered. One is of particular interest on account of its age, eighteen months. Rabot remarks that cases of recovery under two years of age are unusual. Upon admittance the tonsils were swollen and engorged, presenting white patches, but without ganglionic involvement; dyspnœa marked and occurring in spasms. Tracheotomy was at once performed with ease and without much hæmorrhage. Upon the introduction of the canula an enormous piece of false membrane was expelled, the convulsions and nervous phenomena at once ceased; breathing was tranquil; no stitches were taken and the wound was dressed with carbolized gauze. The child passed through an uninterrupted convalescence, the temperature at no time reaching over

39° C.; the patient was discharged from the hospital in three weeks entirely cured.

Since the diphtheritic cases have been isolated at the Charité there have been tracheotomized fifty-nine infants from the age of five to twenty-four months inclusive, with the following results:

Twenty at the age of twenty-four months: three cured. Two at twenty-three months: one cured. Three at twenty-two months: all died. Two at twenty-one months: all died. Four at twenty months: all died. One at nineteen months: died. Eleven at eighteen months: all died but one (the subject of this review). One at seventeen months: died. Two at sixteen months: one died. Two at fifteen months: both died. One at fourteen months: died. Two at thirteen months: fatal. Five at twelve months: all died. One at eleven months: died. One at ten months: died. One at five months: survived the operation for eight hours.

Sanne, in his *Traité de la Diphthérie* (1878), published twenty-three cases known in France and abroad, in which cure occurred in tracheotomized infants between seven and twenty-three months inclusive, thus classified:

Sixteen less than eighteen months old; two cases of eighteen months, operated upon by Potain and Moutard-Martin; and five older. He adds to the preceding, four incomplete successes in children who survived twenty-three, twenty-five, twenty-eight, and forty days after the operation.

Didier thinks that it is probable that many cases of young infants who have survived the operation have not been reported. Peter adds one case of cure at eleven months; several successes at sixteen months; one child of fourteen months, at the Hospital Necker, by Coffer; two cures of infants of twelve and eighteen months, by Hartmann; and a successful crico-tracheotomy by M. Geffrier d'Orleans, on a child of eleven months.

If we follow Sanne's example, and only take the cases under twenty-three months inclusive, we eliminate from the statistics the three cures of two years upon twenty children operated upon at that age, and there only remain two successes to add to the preceding: first, the case of Didier, that we are considering; and, second, a communication by the same writer of a successful case in a child of twenty-three months, who was brought to the hospital with diphtheritic patches upon the buccal cavity, superimposed upon plaques of impetigo; excessive dyspnœa and general spasms.

Tracheotomy was performed by the interne, and excepting an attack of suffocation, which arose when the canula was removed to cleanse it, the child passed through a rapid and speedy convalescence to perfect health.

Didier adds still another case, a girl, aged seventeen months, in whom croup was present but diphtheria absent; tracheotomy was performed; at the end of a week the child was in good condition, but on attempting to remove the canula suffocation was produced, and it was necessary to reintroduce the canula; three more attempts were made to remove it, all, however, were followed by the same symptoms. In nineteen days the child entirely recovered.

These cases seem to prove that the tender age of the child is not a contra-indication to the performance of the operation; this statement is in accordance with the conclusions of Trousseau; and, indeed, Despine and Picot go still further, and say that we, as careful physicians, should not refuse the child this chance for life, no matter what the age. Notwithstanding these statements, the statistics of thirty-nine operations under two years of age is not flattering.

Didier was most unfortunate in that some of his patients contracted measles while convalescing from tracheotomy, the complication proving fatal. When croup arises as a complication of the eruptive fevers many French operators refuse to tracheotomatize.

The Treatment of Whooping-cough.

In a lecture delivered at the Hospital for Sick Children, Paris, Jules Simon (*Journal de Médicine*, 1890, p. 577) remarks that the treatment of the first period is of great importance, for the future progress of the case depend upon the care which is given to it at that time.

One must be well convinced, contrary to the method which was followed formerly, of the necessity of keeping the child indoors; it is often even necessary to keep him in bed as one would do for a serious attack of bronchitis. Archambault has insisted upon the importance of this fact, and since Simon has adopted the same plan he has observed almost no complications in whooping-cough in children who were cared for in time. The pharmaceutical means are not to be neglected, but at best are only secondary; belladonna is, perhaps, the best of all. It is well to employ the following formula: Tincture of aconite root, tincture of belladonna, elixir of paragoric, equal parts—ten, twenty, or thirty drops a day, according to the age of the patient; if there is fever increase the aconite, or if intestinal catarrh increase the paregoric. Chloral may be given in the evening and sulphate of quinine in the morning. These drugs may be used by injection, the former in 15-grain doses, and the sulphate of quinine in three- to five-grain doses, especially if the heart is agitated. We must combat the catarrhal secretions if they are too abundant; under these circumstances an emetic may be given once a week; with the infusion of wild narcissus (daffodil) given every two or three days one obtains a state of mild nausea which favors the expulsion of the secretions; rhatany will also diminish them, of this we may give from three to five grains of the extract before each meal. Coffee is advised, to combat the dyspepsia. The treatment for the third period is that directed to the bronchial adenopathy; it consists principally in the use of tonics, iodine, cod-liver oil, etc., and later, an outdoor life.

To the remedies referred to above one may add with advantage, in certain cases, henbane, to combat the meteorism, in doses of from two to ten grains a day, warm friction of the abdomen with chamomile oil, containing tincture of nux vomica, 4 parts to 100, combined with digitalis when there is anuria, a thing that often happens.

A Case of Spina Bifida with Suppurative Spinal Meningitis and Ependymitis, Due to Bacteria Entering the Wall of the Sac.

Holt and Van Giesen (*Journal of Nervous and Mental Diseases*, 1890) record the case of a child who died in the fourth week of life, which shows quite clearly how a purulent inflammation of the wall of the sac and its dependent lesions of the cerebral nervous system may be due to the entrance of pyogenic bacteria into the sac, and to their extension, along the fluids, meninges, or central canal of the spinal cord, to the brain meninges and ventricles.

At autopsy the volume of the lateral ventricles was found to be at least forty or fifty times their volume in a normal brain of the same age, but there was no corresponding expansion in the diameter of the brain; indeed, the brain itself was perhaps a trifle smaller than usual; five ounces of thin yellowish pus escaped from the ventricles during the removal of the brain. The lateral ventricles, their horns, and the third ventricle were everywhere lined with a thin, translucent, red membrane, having the appearance of granulation tissue. The meninges and the substance of the spinal cord were uniformly congested; the sac contained about half an ounce of pus.

Microscopical examination of the skin of the sac demonstrated beneath or internal to the subcutaneous connective-tissue of the skin, a zone of irregular thickness, composed of necrotic tissue; here great numbers of bacteria, of three kinds, were found: a few short, thick bacilli, some large cocci, and—the most numerous, predominating form—small cocci in chains and clusters.

In the section from this region in two places, microscopic plug-like continuations of the necrotic zone extended through the entire thickness of the excoriated central portion of the skin of the sac and communicated with the outer surface of the skin; these two plugs contain many small cocci.

In the section stained with Gram's method and examined with the Zeiss one-twelfth oil-immersion lens, small cocci, like the predominant form in the sac wall, were present in the pia mater, in the anterior fissure and its communicating channels, in the anterior commissure, in the exudate plugging the central canal, and in the pellicles lying over the pia mater; these cocci were also noted in a flake or pellicle of pus on the pons, in the walls of the third ventricle, the upper portion of the aqueduct of Sylvius, and of the lateral ventricles.

The morphological identity of the small cocci in the different regions, and the absence in the brain and cord of the other two forms of bacteria in the sac indicate the small cocci as the real pathogenic agents, and that the associated bacteria are merely contaminating forms. As far as can be determined by their dimensions and grouping, and by comparing them with other known species of pyogenic micrococci in control sections, the small cocci in this case are thought to be the streptococci pyogenes.

THE PATHOGENESIS OF DIGESTIVE DISORDERS OF BACTERIAL ORIGIN DURING THE NURSING PERIOD.

According to ESCHERICH (*Jahrb. f. Kinderheilk.*, Bd. xxxi., Hefte 1, 2) digestive disorders in infants arising from the fermentation of milk, or from some condition in the contents of the intestines, must be distinguished from infectious diseases of the intestine which are due to microörganisms independently of the form of nutrition. The occurrence of the latter is associated with the fermentative activity of certain very common germs in an appropriate medium and under definite external relations. These germs form certain organic acids, which are irritating to the intestinal canal; and also ptomaïnes, the effect of which upon the central nervous system of infants is seen in the severe symptoms which accompany summer diarrhœa. Fermentation processes may be of ectogenous or endogenous origin. The former are concerned almost exclusively with cow's milk and may begin within a few hours after the milk has been drawn. The lactic-acid fermentations are due to the breaking-up of the milk sugar, and vary according to the temperature at which the milk is kept. Endogenous fermentation may be a continuation of the ectogenous, and is easily possible, since the infant's stomach is not rich in hydrochloric acid, by which germs introduced with the food are easily destroyed. Fermentation processes associated with a milk diet, both in the stomach and small intestine, lead to acid dyspepsia and diarrhœa, by the destruction of the milk sugar. If the sugar reaches that portion of the intestine where it may be absorbed, the conditions will then be favorable for the decomposition of albumin. Milk which has undergone ectogenous fermentation will cause acute intoxication, with violent local symptoms of irritation, and sometimes collapse, cyanosis, and dyspnœa. One form of endogenous fermentation is the isolated-stomach fermentation with acid vomiting, atony, and ectasis of the organ. Other forms are the small-intestine fermentation with its acid diarrhœa, and the large-intestine fermentation with phenomena of mild colitis. Dyspepsia which is due to starch fermentation is very different from the sugar dyspepsias. In the former there is an acid feculent diarrhœa due to the presence of undigested starch in the lower portion of the bowel, and this tends to develop into chronic intestinal catarrh. After a while there may be symptoms resembling cholera, or the upper portion of the intestine or the stomach may be implicated.

PUBLIC HEALTH.

UNDER THE CHARGE OF

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WEIL'S DISEASE.

Physicians in the Southern States, where bilious fevers of every form are rife, may be able to render valuable aid in the solution of the question whether "Weil's Disease" is to be recognized as a distinct specific and communicable disease, or to be considered only as a form of relapsing fever intensified by coexisting or previous malarial poisoning. It appears to be more or less prevalent in Egypt, Syria, and the Balkan States, and a number of accurate and careful observations have, during the past year, been published in the Austrian and Slavonian medical journals. Dr. Frantisek Sumbera[1] reports three cases, Staff-surgeon Th. Hueber[2] four, and Dr. Justyn Karlinski[3] five; the first two contending for its specific character, which is doubted by the last,

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[1] Dr. Frantisek Sumbera: Sbornik Lekarsky, iii. 2, 3, p. 298. 1890.

[2] Dr. Th. Hueber: Deutsch. milit. ärztl. Zeitschr., xix. 1. 1890.

[3] Dr. Justyn Karlinski: Fortsch. d. Med., viii. 5. 1890.